

ISSUE 10; September 2021

Description

- Surface mount temperature compensated voltage controlled oscillator (TCVCXO) providing a high degree of frequency stability over a wide temperature range in a hermetically sealed ceramic package



Frequency Parameters

- Frequency: 10.0MHz to 40.0MHz
- Frequency Stability: ± 0.90 ppm
- Ageing: ± 1 ppm typical in 1st year @25°C

Electrical Parameters

- Supply Voltage: 3.3V $\pm 5\%$
- Supply current typical at 20MHz
- Supply Voltage Variation:
 - <30MHz ± 0.3 ppm
 - 30MHz to <40MHz ± 0.4 ppm
 - 40MHz ± 0.5 ppm
- Load Variation: ± 0.2 ppm (@15pF $\pm 10\%$)
After Reflow: ± 1.0 ppm

Frequency Adjustment

- Pulling: ± 5 ppm min
- Control Voltage: 1.65V ± 1.0 V

Operating Temperature Ranges

- 20 to 70°C

Output Details

- Output Compatibility: HCMOS
- Drive Capability: 15pF (nominal)

Environmental Parameters

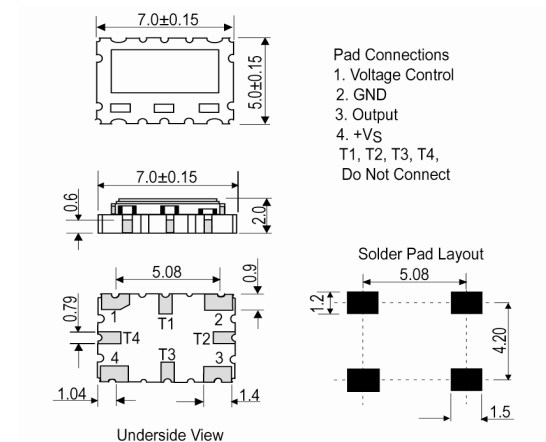
- Shock: IEC 60068-2-27, Test Ea: 980m/s² acceleration for 6ms, 3 shocks in each of 3 mutually perpendicular planes
- Vibration: IEC 60068-2-6, Test Fc, Procedure B4: 10Hz-60Hz 1.5mm displacement, 60-2000Hz at 98.1m/s², 30mins in 3 mutually perpendicular planes at 1 oct/min
- Solderability: MIL-STD-202, Method 208, Category 3
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

- Soldering: Suitable for Convection Reflow soldering. Peak temperature 260°C for 10sec max
- Washing: Able to withstand aqueous washing
- RoHS Terminations: NiCoAu
- RoHS Reflow: 260degC 30s



Outline (mm)



Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

Ordering Information

- Frequency*
Model*
Output
Frequency Stability (over operating temperature range)
Operating Temperature Range
Supply Voltage
Frequency Adjustment
- Example
10.0MHz CFPT-125
HCMOS $\pm 0.9\text{ppm}$ -20 to 70C 3.3V $\pm 5\text{ppm}$ min

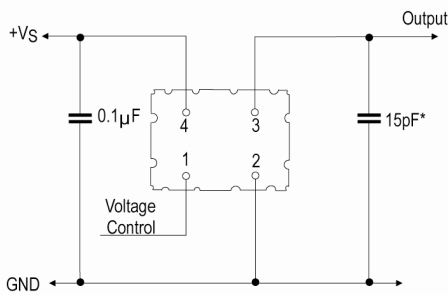
Compliance

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): 1

Packaging Details

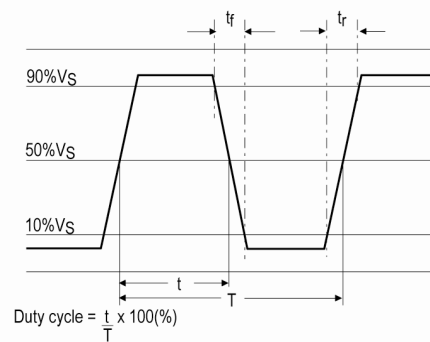
- Pack Style: Cutt In tape, cut from a reel
Pack Size: 100
- Pack Style: Bulk Loose in bulk pack
Pack Size: 100
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- Pack Style: R500 Tape & reel in accordance with EIA-481-D
Pack Size: 500

Test Circuit



* Inclusive of probe and jig capacitance

Wave Form



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Electrical Specification - maximum limiting values 3.3V \pm 5%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		$^{\circ}$ C	ppm	mA	ns	%
10.0MHz	10.0MHz	-20 to 70	\pm 0.9	3	8	45/55%
12.8MHz	12.8MHz	-20 to 70	\pm 0.9	3	8	45/55%
13.0MHz	13.0MHz	-20 to 70	\pm 0.9	3	8	45/55%
14.4MHz	14.4MHz	-20 to 70	\pm 0.9	3	8	45/55%
16.32MHz	16.32MHz	-20 to 70	\pm 0.9	3	8	45/55%
16.384MHz	16.384MHz	-20 to 70	\pm 0.9	3	8	45/55%
19.44MHz	19.44MHz	-20 to 70	\pm 0.9	3	8	45/55%
20.0MHz	20.0MHz	-20 to 70	\pm 0.9	3	8	45/55%
26.0MHz	26.0MHz	-20 to 70	\pm 0.9	3	8	45/55%
32.768MHz	32.768MHz	-20 to 70	\pm 0.9	3	8	45/55%
40.0MHz	40.0MHz	-20 to 70	\pm 0.9	3	8	45/55%

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